

### Abstract

A sprocket is provided having a plurality of teeth around its circumference. Adjacent teeth are separated by roots each having a root radius defined as  
5 the distance between the center of the sprocket and a point along the root closest to the sprocket center in a radial direction. In one aspect of the invention, the sprocket comprises at least two different root radii arranged in a pattern effective to redistribute tensions  
10 imparted to a chain by the sprocket at one or more predetermined sprocket orders.